

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

NATIONAL STEEL CAR LIMITED,)	
)	
Plaintiff,)	Redacted - Public Version
)	
v.)	C.A. No. 24-594-JLH-CJB
)	
FREIGHTCAR AMERICA, INC.,)	
FREIGHTCAR NORTH AMERICA, LLC,)	
JAC OPERATIONS, INC., AND FCA-)	
FASEMEX, LLC)	
)	
Defendant.)	
)	
FREIGHTCAR AMERICA, INC.,)	
FREIGHTCAR NORTH AMERICA, LLC,)	
JAC OPERATIONS, INC. and FCA-)	
FASEMEX, LLC,)	
)	
Counter-Claimant,)	
)	
v.)	
)	
NATIONAL STEEL CAR LIMITED,)	
)	
Counter-Defendant.)	

JOINT CLAIM CONSTRUCTION BRIEF

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EXHIBITS TO JOINT CLAIM CHART (“JCC” D.I. 80)

Exhibit A	U.S. Patent No. 8,132,515
Exhibit B	U.S. Patent No. 8,166,892
Exhibit C	’515 Patent File History excerpts
Exhibit D	’892 Patent File History excerpt
Exhibit E	U.S. Patent No. 4,348,962 to Smith
Exhibit F	U.S. Patent No. 4,800,820 to Tomaka

EXHIBITS TO JOINT APPENDIX (“JA”)

Exhibit G	Declaration of Ronald P. Sellberg
Exhibit H	U.S. Patent No. 3,339,499 to Charles
Exhibit I	U.S. Patent No. 3,844,229 to Martin
Exhibit J	U.S. Patent No. 3,490,387 to Halcomb
Exhibit K	Screenshot of The Free Dictionary - www.thefreedictionary.com
Exhibit L	Screenshot of The Meriam-Webster Dictionary- www.merriam-webster.com
Exhibit M	Declaration of Mehdi Ahmadian, Ph.D
Exhibit N	Declaration of Justin J. Gillett
Exhibit O	Email from NSC to FreightCar America dated July 22, 2025

I. INTRODUCTION

A. NSC's Opening Introduction

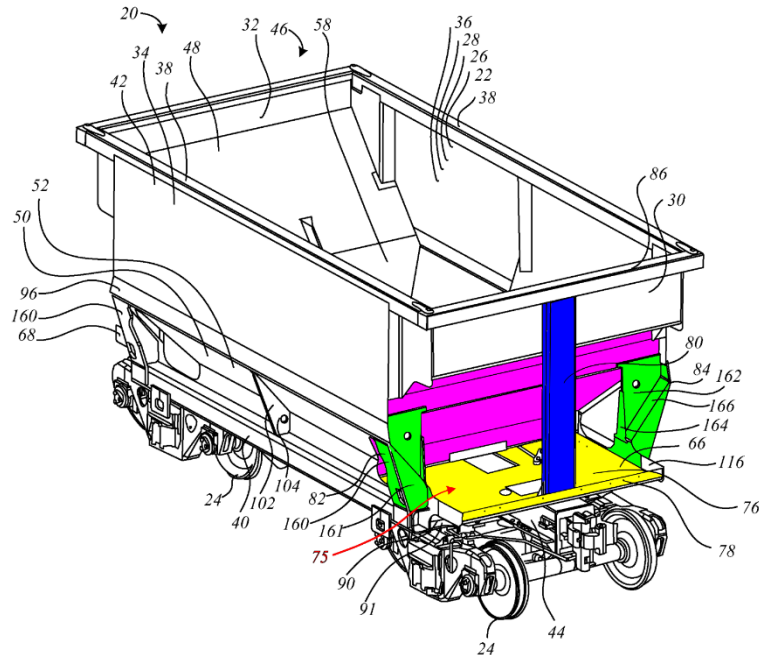
NSC asserts two related patents, Nos. 8,132,515 (D.I. 80-1, the “’515 Patent”) and 8,166,892 (D.I. 80-2, the “’892 Patent”) (collectively, the “Asserted Patents”¹) against Defendants FreightCar America, Inc., FreightCar North America LLC, JAC Operations Inc., and FCA-FASEMEX LLC (collectively, “FreightCar” or “Defendants”).

The Asserted Patents stem from improvements made to ore-carrying rail cars that travel on the Duluth, Missabe, and Iron Range Railway (“DMIR”) between mines and docks. At the mines, ore is loaded into the open tops of the railcars. The docks see the railcars discharge their loads through movable doors onto ships under the tracks. NSC designed and manufactured their improved railcars in around 2008-2009, to replace railcars that had been in service on the DMIR for over fifty (50) years, and applied for the Asserted Patents.

The Asserted Patents identify several problems in the art stemming from the requirements of the railways and docks on the DMIR, which require railcars to have severely limited dimensional profiles, leading to the distinctive design of NSC’s patented railcars. (Sellberg Decl.² ¶ 19.) For example, the Asserted Patents discuss maximizing the hopper and lading volume, while designing the car within limited dimensional profiles. (’892 Patent at 1:36-2:13.) The abnormally short dimensions of the railcar led the inventors to arrange the primary structure at the ends of the car to not only support the end slope sheet, but to create an open space in which machinery can be installed (*see, e.g.*, ’892 Patent at 14:27-55). This is shown in Figure 1:

¹ The ’515 Patent and the ’892 Patent share a common specification, and citations herein are made to one or both patents, as applicable to the claim terms discussed.

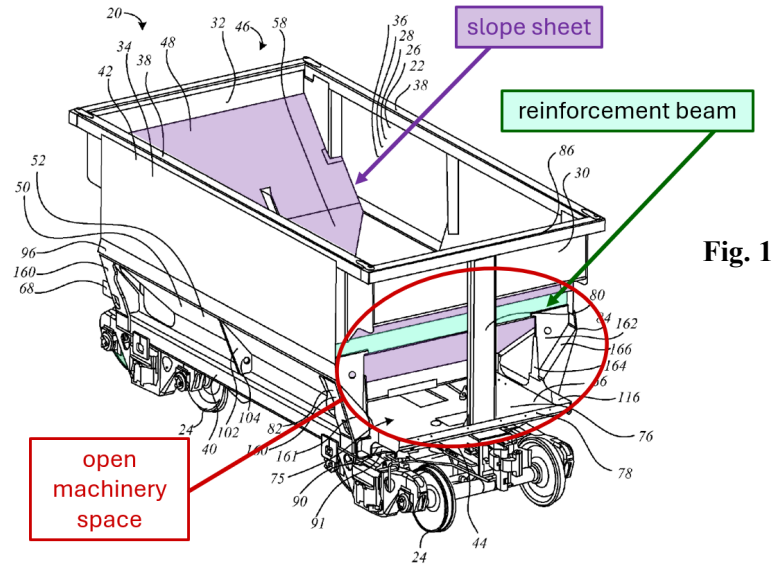
² “Sellberg Decl.” refers to the Declaration of Ronald P. Sellberg attached hereto as Exhibit G.



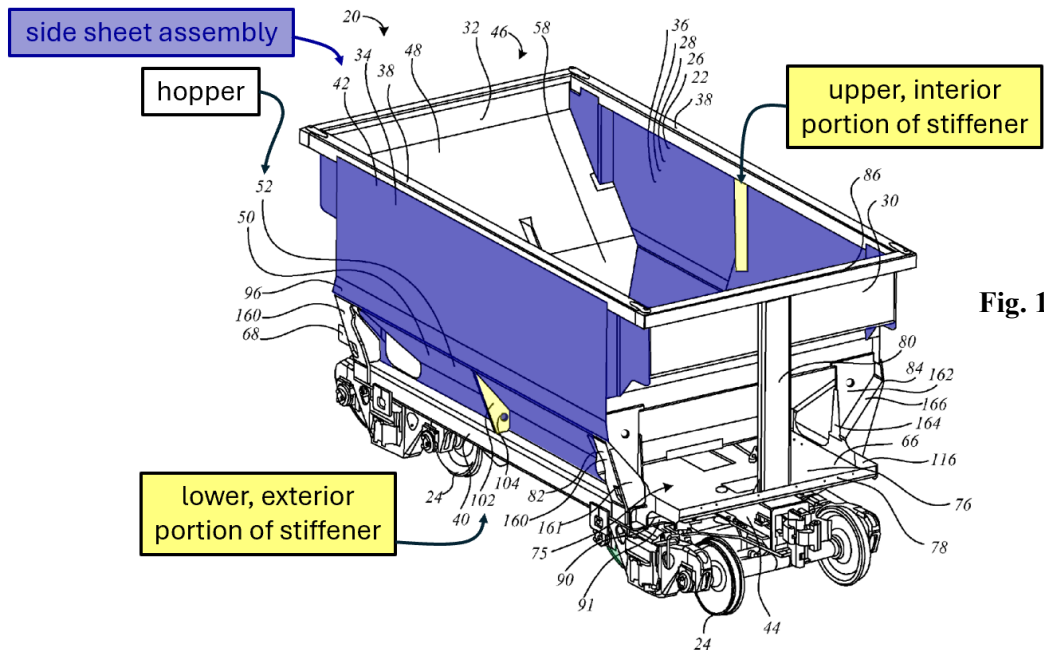
(’892 Patent at Fig. 1 (annotated to show machinery space 75 (red arrow) bounded by shear plate 76 (yellow), end post 80 (blue), corner posts 82, 84, and end slope sheet (pink); 14:27-67.)

B. FreightCar America’s Answering Introduction

The asserted patents describe a bottom-discharge hopper car, which is a railway freight car loaded through the hopper’s open top and discharged through doors at the bottom of the hopper. The hopper’s forward and rear walls—called “slope sheets”—incline toward the bottom center of the car to channel the payload to the hopper doors. The ’515 patent is directed to reinforcing the slope sheets with transverse support beams under the slope sheet. By supporting the slope sheets with transverse beams, the space below the slope sheet—called the “machinery space”—is not encumbered by support structures and can house machinery such as equipment for opening the hopper doors.



The '892 patent is directed to reinforcing the hopper car's side walls with vertically oriented web stiffeners that have two portions: a lower portion on the exterior of the side sheet and an upper portion on the interior of the side sheet. Figure 1 of the patent is a perspective view of the hopper car that shows the lower, exterior portion of the stiffener of one side wall; and the upper, interior portion of the stiffener of the other side wall.



Although the claims of the asserted patents are lengthy, the parties dispute the meaning of only three claim terms. NSC's proposed constructions of these terms should be rejected because they arbitrarily re-write the claim language, render portions of the asserted claims superfluous, and would lead to jury confusion. FreightCar America's constructions should be adopted because they are true to the claim language and specification and pose no risk of jury confusion.

C. NSC's Reply Introduction

FreightCar has adopted NSC's construction of the claim terms "elephant ears" and "shear web ears." Thus, in the absence of a dispute, no construction of those terms is believed necessary.

However, FreightCar continues to assert a construction of "sloped side sheet" that conflicts with the language of the claims in which those claim terms appear. With respect to the "shear plate extending [lengthwise/longitudinally] along said draft sill and cross-wise from side to side of said hopper car" claim terms, NSC has adopted a portion of FreightCar's proposed construction in order to focus the issue in dispute, *i.e.*, that FreightCar's proposed construction would improperly read out the only embodiment of this claimed feature in the specification. Finally, FreightCar's proposed construction of "flat bar" includes "whether or not bent," which has no support in the specification and is confusing and superfluous. For the foregoing reasons, as set forth in more detailed below, NSC requests the Court adopt its proposed constructions of these terms.

D. FreightCar America's Sur-Reply Introduction

NSC's reply largely re-hashes the arguments it made in its opening position, with one notable exception. NSC now abandons its flawed construction of "extending ... cross-wise from side to side of said hopper car" and proposes an entirely new construction. This new construction attempts to address the fundamental flaw in the original construction, which assigned no meaning to the claim language "from side to side of said hopper car," rendering that language superfluous.

NSC's new construction – “extending ... laterally from side sill to side sill” – is on its face a reasonable construction of “extending ... crosswise from side to side of said hopper car.” But NSC seeks to distort the seemingly straightforward words “from side sill to side sill” so that they encompass shear plates that *do not extend to the side sills* because they are blocked by an intervening structure. NSC's interpretation of its new construction is unreasonable. The Court should reject the construction and adopt FreightCar America's proposed construction.

II. PERSON HAVING ORDINARY SKILL IN THE ART

A. NSC's Proposed Person Having Ordinary Skill in the Art (“POSITA”)

NSC contends that a POSITA in the field of the '892 and '515 Patents would have at least a bachelor's degree in a discipline related to mechanical engineering, physics, structural design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars. (Sellberg Decl. ¶ 20.)

FreightCar contends that “a person of ordinary skill in the art to which the Asserted Patents pertain would have had at least a bachelor's degree in a discipline related to mechanical engineering, physics, structural design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars or similar vehicles.”

FreightCar's proposed person having ordinary skill in the art is incorrect because a person having only designed “similar vehicles” to rail cars may not appreciate the specific standards or regulations related to rail cars. (Sellberg Decl. ¶ 22.)

B. FreightCar America's Proposal

The claims of the asserted patents are directed to reinforcing and assuring the structural integrity of a railway hopper car. Accordingly, a person of ordinary skill in the art would have had at least a bachelor's degree in a discipline related to mechanical engineering, physics, structural

design, or an equivalent discipline, and at least two years of experience designing or analyzing rail cars or similar vehicles. Ex. M ¶ 13 (“Ahmadian Decl.”).

III. AGREED-UPON CONSTRUCTIONS

Claim Term	Construction
“said second region of said sidewall extending downwardly or said first top chord” (’892 Patent, claim 2)	said second region of said sidewall extending downwardly of said first top chord.
“said sidewall stiffener having web continuity between said first and second portions thereof” (’892 Patent claims 1, 2; ’515 Patent claims 40) “said stiffener having vertical web continuity through said transition portion” (’892 Patent claim 4; ’515 Patent claims 42)	Plain and ordinary meaning, i.e., said [sidewall] stiffener having substantial co-planar alignment of the first and second portions through a transition portion to resist shear force
“mate” (’892 Patent claims 10, 13, and 14; ’515 Patent claim 18)	Plain and ordinary meaning, i.e., directly or indirectly connected to
“elephant ears” (’892 Patent, claim 2, ’515 Patent, claims 7, 20, 24, 32) “shear web ears” (’515 Patent, claim 18)	large, substantially triangular planar plates

IV. DISPUTED CLAIM CONSTRUCTIONS

A. “sloped side sheet” (’892 Patent, claims 6, 7; ’515 Patent, claim 43)

NSC’s Proposed Construction	FreightCar America’s Proposed Construction
Plain and ordinary meaning, i.e., a sheet extending in a longitudinal direction with respect to a side of the hopper and which forms a sloped surface	sloped portion of the side wall

1. NSC’s Opening Position

Claim 6 of the ’892 Patent states:

6. The rail road hopper car of claim 2 wherein:
said first upstanding sidewall has a third region intermediate said first and

second regions, said third region including a side sheet transition portion passing across said sidewall stiffener from an inboard margin thereof to an outboard margin thereof;

said hopper includes first and second sloped side sheets; and

said first *sloped side sheet* meets said first sidewall at said transition portion.

Claim 43 of the '515 Patent uses nearly identical language. Claim 7 of the '892 Patent states that “said first sidewall has an overall height from said first side sill to said first top chord, L, and said first *sloped side sheet* meets said transition portion at an [sic] height that is in the range of $\frac{1}{4}$ to $\frac{2}{3}$ L above said first side sill.”

FreightCar seeks to construe “sloped side sheet” as a “sloped portion of the side wall.” This construction is unsupported by both the claims and specification and should be rejected. As recited in the claims, the “sloped side sheet” and the “sidewall” are separate and distinct elements, with the first sloped side sheet meeting the first side wall at the transition portion. The sidewall and sloped side sheet are also separate and distinct elements in the specification.

Specifically, the sloped side sheet is described as being part of “a lower stationary portion defined by a set of converging sloped walls, namely the side . . . slope sheet assembl[y] . . . 50.” ('892 Patent at 13:50-55.) Meanwhile, the “sidewall” is described as consisting of a top chord 38 and a side sill 40, and side sheet assembly 42 extending there between, with an upper sheet portion 92, and a lower sheet portion 94. ('892 Patent at 15:1-24.)

Importantly, the lower sheet portion 94 of the sidewall consists of an upper flange 96, an intermediate portion 98, and a bottom flange 100. (*Id.*) Each of these elements is shown in Figure 2c, which is described in the specification as showing an end view of the sidewall ('892 Patent at 10:55):



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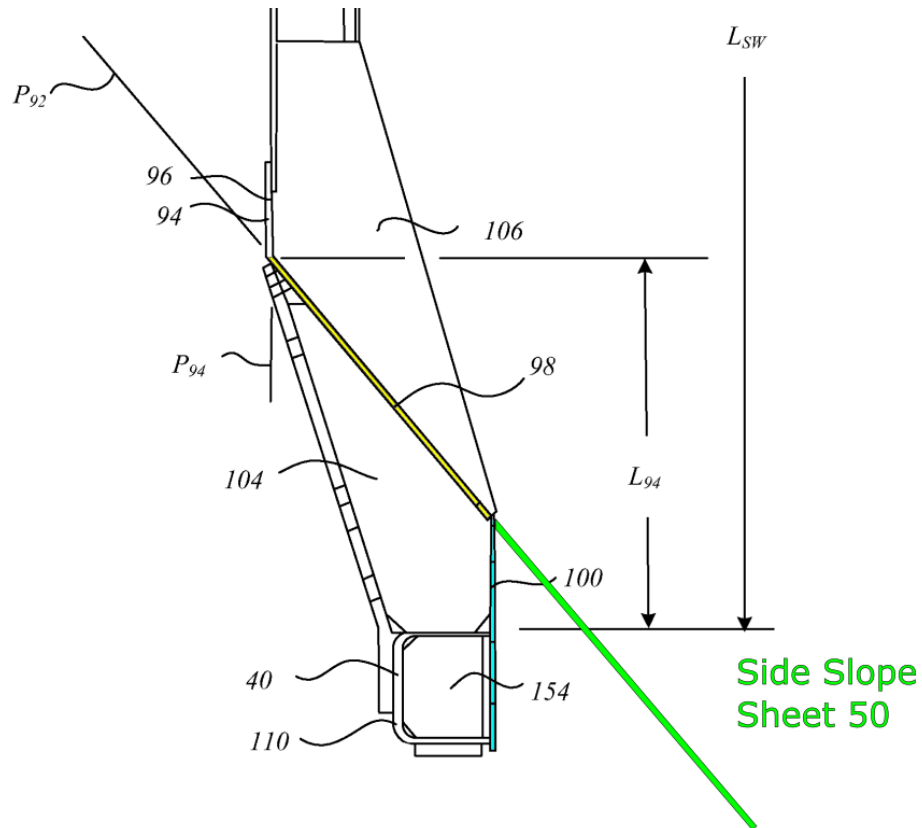


Figure 2c

(’892 Patent at Fig. 2c (portion of figure showing side slope sheet in green, bottom flange 100 in blue, and sloped portion 98 in yellow).)³ This is confirmed by Figs. 2b and 3b. Figure 2b is a view of the sidewall of the railcar from the outside, and shows the bottom flange 100 of the side sheet (shown in light blue) in line with the apertures 114 (red):

³ If presented in the specification this way, the description of Figure 2c in the specification would have read to “FIG. 2c shows an end view of the sidewall of FIG 2a, *along with side slope sheet 50.*”

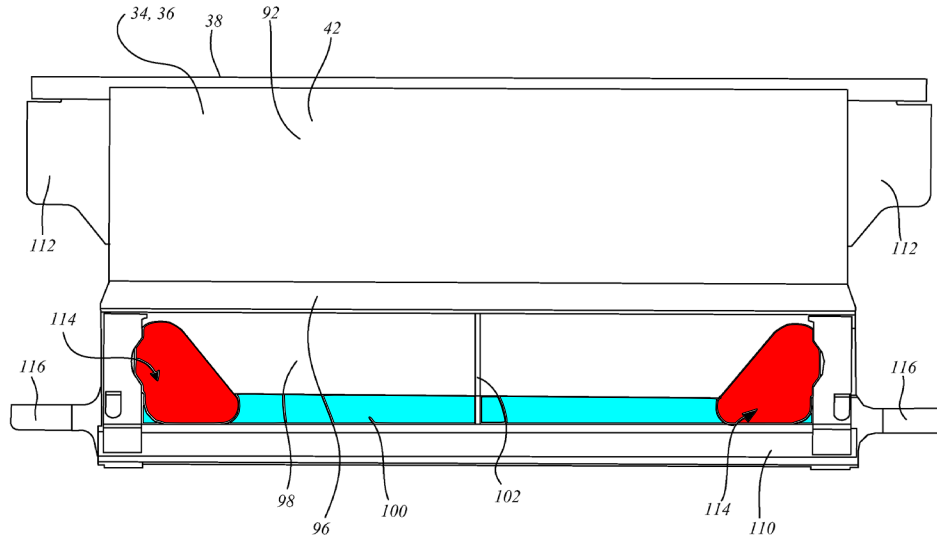


Figure 2b

(‘892 Patent at Figs. 2b, showing bottom flange 100 in blue and apertures 114 in red.) Figure 3b, is a cross-sectional view through the middle of the railcar and shows side slope sheet 50 (shown in green), with aperture 114 (red):

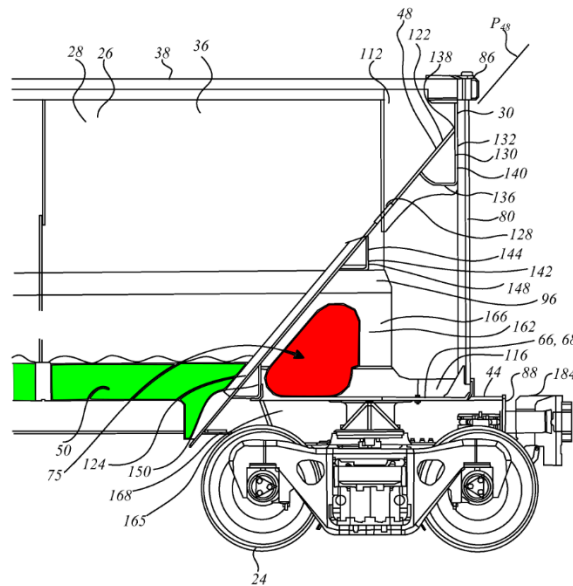


Figure 3b

(‘892 Patent at Figs. 3b, showing side slope sheet 50 in green, apertures 114 in red.) As seen by comparing Figure 2b and 3b, the upper margin of the bottom flange 100 in Figure 2b is at the same

height as the upper margin of the side slope sheet 50 in Figure 3b because both are at the same height when compared to aperture 114 (in red). This is consistent with the placement of the side slope sheet as shown in modified Figure 2c:

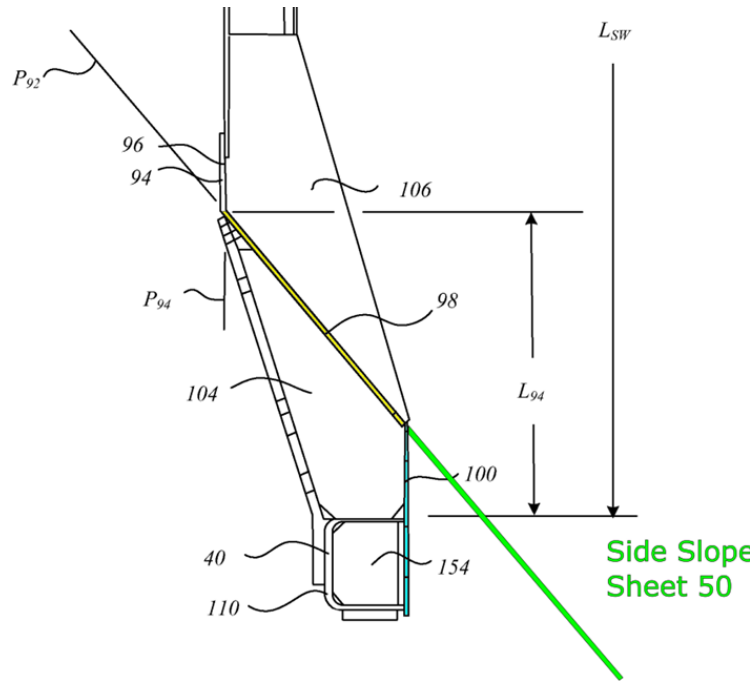


Figure 2c

(’892 Patent at Fig. 2c (portion of figure showing side slope sheet in green, bottom flange 100 in blue, and sloped portion 98 in yellow).)

To the extent that FreightCar is arguing that intermediate portion 98 is part of the sloped side sheet, this argument is belied by the specification which explicitly identifies intermediate portion 98 as part of the lower sheet portion 92, which is a part of the sidewall. (’892 Patent at 15:1-24.) The specification does not describe the side slope sheet 50 as being a part of the lower sheet portion 92 (and thus part of the side wall) as is the case for intermediate portion 98. Instead, the side slope sheet 50 is described as being “**welded to the lower margin of the inclined or sloped portion 98.**” (’892 Patent at 15:46-50 (emphasis added); *see also* 16:58-65. The Federal Circuit has instructed that “[w]here a claim lists elements separately, the clear implication of the claim

language is that those elements are distinct components of the patented invention.” *Becton, Dickinson & Co. v. Tyco Healthcare Gp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (internal quotations omitted). Claim 2 of the ’892 Patent and claim 40 of the ’515 Patent, from which the relevant claims depend, require that “said first sidewall having a continuous section between said first and second regions thereof.” Accordingly, intermediate portion 98 is claimed as a separate element and not as part of the “sloped side sheet.”

Accordingly, FreightCar’s proposed construction is not supported by the claims or the specification. In contrast, NSC proposes giving this term its plain and ordinary meaning, namely, “a sheet extending in a longitudinal direction with respect to a side of the hopper and which forms a sloped surface.” (Sellberg Decl. ¶ 24.) This meaning is directly supported by the claims and the specification, which all show a longitudinal sheet forming a sloped surface. (*Id.*)

Accordingly, FreightCar’s proposed construction should be rejected and the plain and ordinary meaning of “sloped side sheet” should be adopted as defined by NSC.

2. FreightCar America’s Answering Position

The parties dispute the meaning of the term “sloped side sheet.” NSC rewrites this phrase as “side slope sheet” and relies on the specification’s discussion of the “side slope sheet 50.” *Supra*, NSC’s Opening Position. However, “sloped side sheet” and “side slope sheet” are different terms. The common specification of the asserted patents uses both terms without ever equating them. *See, e.g.*, ’515 Patent at 16:39-41 (“sloped side sheet”) and 15:63-64 (“side slope sheet”).⁴

Based on the plain meaning of the claim language, a “sloped side sheet” is a side sheet that is partially or entirely sloped. The specification discloses such a structure in describing the side

⁴ The ’892 patent and the ’515 patent share a common specification. For simplicity, all citations to the common specification will be to the ’515 patent.

walls of the hopper car. *Id.* at 15:6-29. The specification explains that sidewalls 34 and 36 each include a side sill 40, at the lower end of the sidewall, as well as a top chord 38 and a side sheet assembly 42. *Id.* at 15:9-14. Side sheet assembly 42 includes an upper sheet portion 92 and a lower sheet portion 94. *Id.* at 15:14-18. These components of the side walls are shown in Figure 2a:

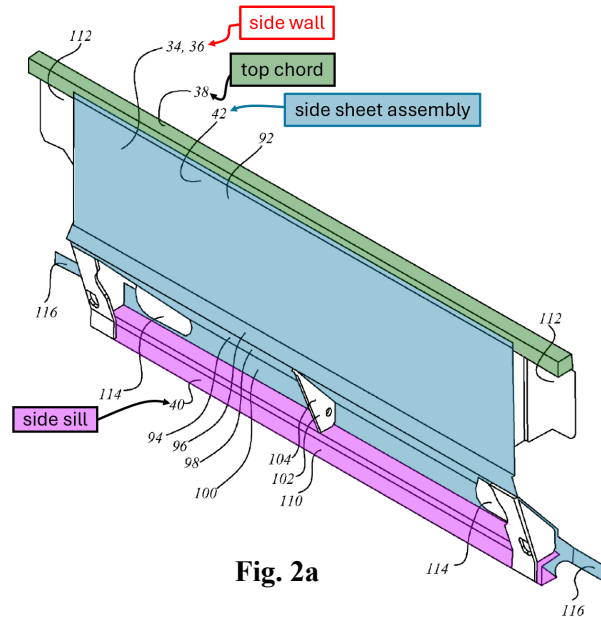


Fig. 2a

As shown in Fig. 2c below, while upper sheet portion 92 is entirely vertical, lower sheet portion 94 includes a sloped portion 98 that lies between two vertical portions 96 and 100. *Id.*, Fig. 2c. The specification calls the sloped portion of the lower side sheet “intermediate portion 98” and states that it “runs in an inclined plane **sloping** inwardly and downwardly on the slope of the hopper **side sheets.**” *Id.* at 15:22-24 (emphasis added). Thus, the specification discloses side walls whose side sheets have sloped portions 98. “Sloped side sheet” should therefore be construed in accordance with its plain language to mean “sloped portion of the side wall.”

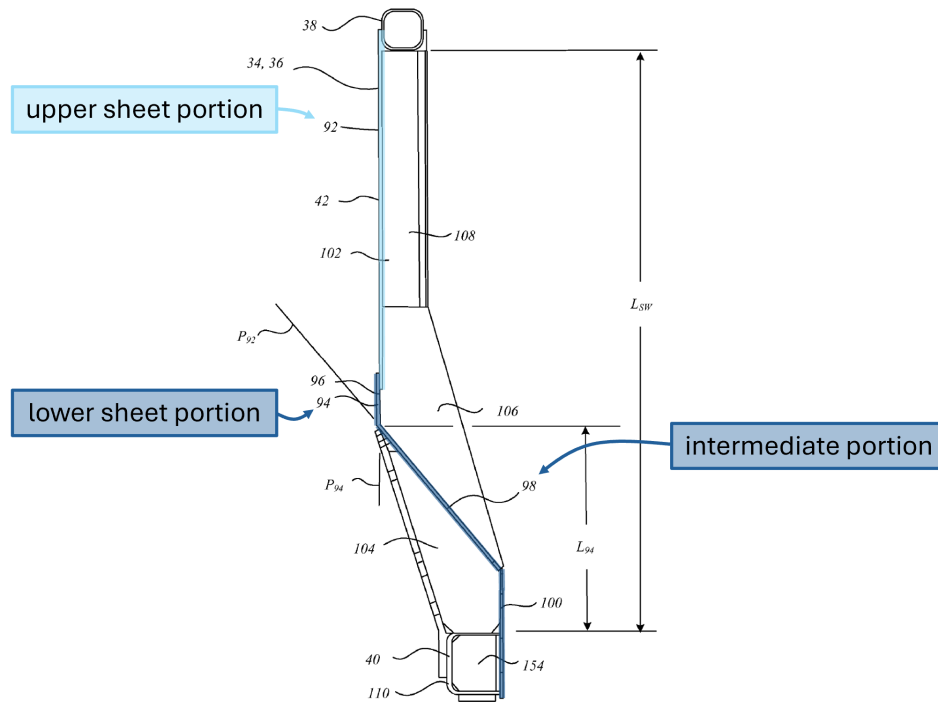


Figure 2c

NSC's construction rewrites "sloped side sheet" to read "side slope sheet" without any justification for conflating these distinct terms. Further, slope sheets and side sheets are different structures. Slope sheets are convergent sheets on the ends ("end slope sheet" 48) and sides ("side slope sheet" 50) of the hopper. *Id.* at Abstract ("The hopper has convergent end and side slope sheets that feed a bottom discharge."). Side sheets, on the other hand, are part of the side wall. *Id.* at 15:9-18 (sidewalls 34, 36 each include a side sheet assembly 42). Because NSC has construed not the actual language of the asserted claims, but instead language it has rewritten for its own advantage, its proposed construction should be rejected. *See Guardant Health, Inc. v. Found. Med., Inc.*, No. 1:17-cv-01616, 2019 WL 5677748, at *13 (D. Del. Nov. 1, 2019) (Burke, M.J.), *report and recommendation adopted*, No. 1:17-cv-01616, 2020 WL 1329513 (D. Del. Mar. 23, 2020) ("The Court cannot now rewrite these claims so that they align with how [Plaintiff] wishes they would read.").

In its brief, NSC adds a green line to the patents' Figure 2c to show where it believes the "sloped side sheet 50" would be located in that figure. *Supra*, NSC's Opening Position. But even if NSC's re-drawing of Figure 2c were appropriate, the location of the *side slope sheet* is irrelevant, as the disputed claim language is "*sloped side sheet*."

NSC also argues that FreightCar America's construction should be rejected because it would make intermediate portion 98 "part of the 'sloped side sheet.'" *Id.* However, as discussed above, the patent expressly states that intermediate portion 98 is part of the lower side sheet and that it is sloped. '515 Patent at 15:9-26.

Finally, NSC argues that the "specification does not describe the side slope sheet 50 as being a part of the lower sheet portion 92 (and thus part of the side wall) as is the case for intermediate portion 98." *Supra*, NSC's Opening Position. NSC cites cases for the proposition that claim elements that are separately listed must be "distinct" components of the patented invention. *Id.* (citing *Becton, Dickinson & Co. v. Tyco Healthcare Gp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010)).

However, the Federal Circuit has explained that any presumption that separately listed claim limitations may indicate separate and distinct physical structure "may always be rebutted in the context of a particular patent." *Google LLC v. EcoFactor, Inc.*, 92 F.4th 1049, 1058 (Fed. Cir. 2024) (reversing a claim construction that five separately listed inputs "are 'distinct component[s]' that 'must be used distinctly from the other listed input[s]'").

In *Becton*, the claimed "hinged arm" and "spring means" were necessarily separate structures because the claims recited that the two structures were "connected to" one another. *Becton*, 616 F.3d at 1254. A construction that permitted them to be the same structure would have "render[ed] the asserted claims nonsensical." *Id.* Here, by contrast, nothing prevents the same

sloped sheet of metal from being part of the side wall and part of the hopper's side slope sheet. Any separately listed claim elements can often be satisfied by a single component.

In this case, the specification demonstrates that intermediate portion 98 – a section of the side wall's lower sheet portion 92 – is also part of the side slope sheet 50. Indeed, Figure 1 *expressly labels* the sloped portion of the side wall – *i.e.*, intermediate portion 98 in Figure 2a and Figure 2c – with the numeral 50 that designates the side slope sheet. *Compare* Fig. 1 (below) *with* Fig. 2c (shown above). The conclusion is inescapable: the side wall's intermediate portion 98 is also part of the hopper's side slope sheet 50, not an entirely distinct component.

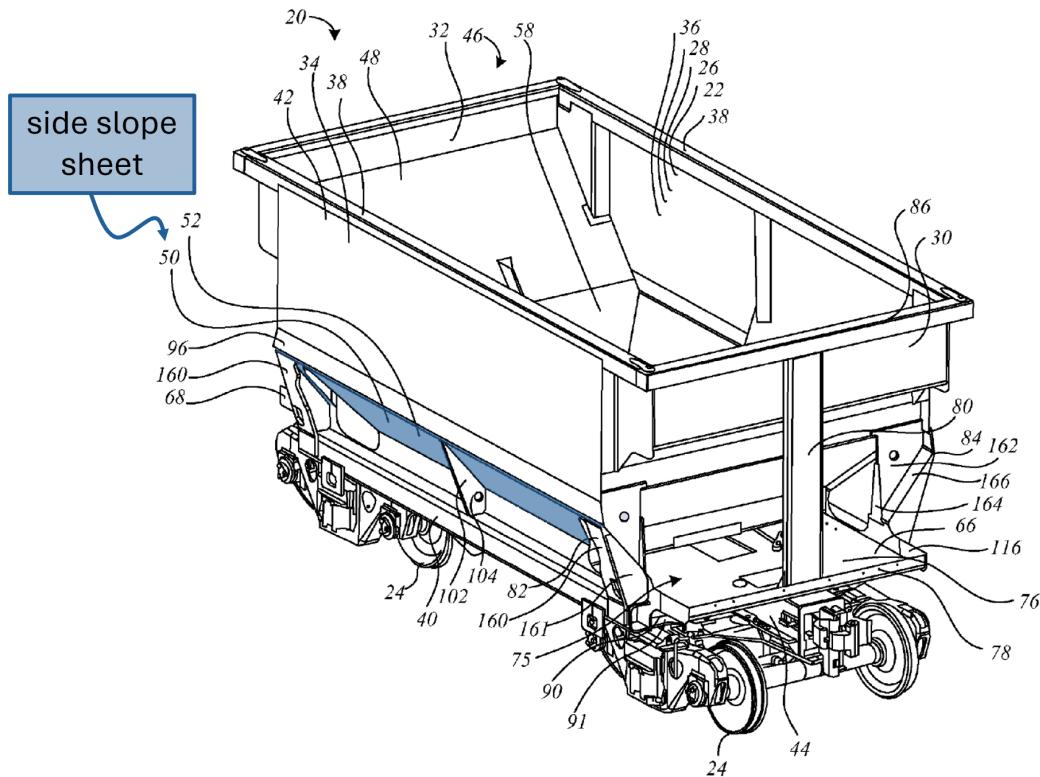


Figure 1

This is confirmed by the patents' written description, which states that the corner post's flange plate 160 extends "to an upper end at the juncture of the side slope sheet with the side wall vertical leg of the lower side wall sheet." '515 Patent at 16:63-17:3. As shown in Figure 1 below,

the upper end of flange plate 160 reaches the top of the sloped portion of the side wall, the portion labeled “intermediate portion 98” in Figures 2a, 2c and “side slope sheet 50” in Figure 1. The juncture of the side slope sheet 50 and the side wall is therefore at the *upper end* of intermediate portion 98. It follows that intermediate portion 98 must be part of the side slope sheet 50, as the label “50” in Figure 1 indicates.

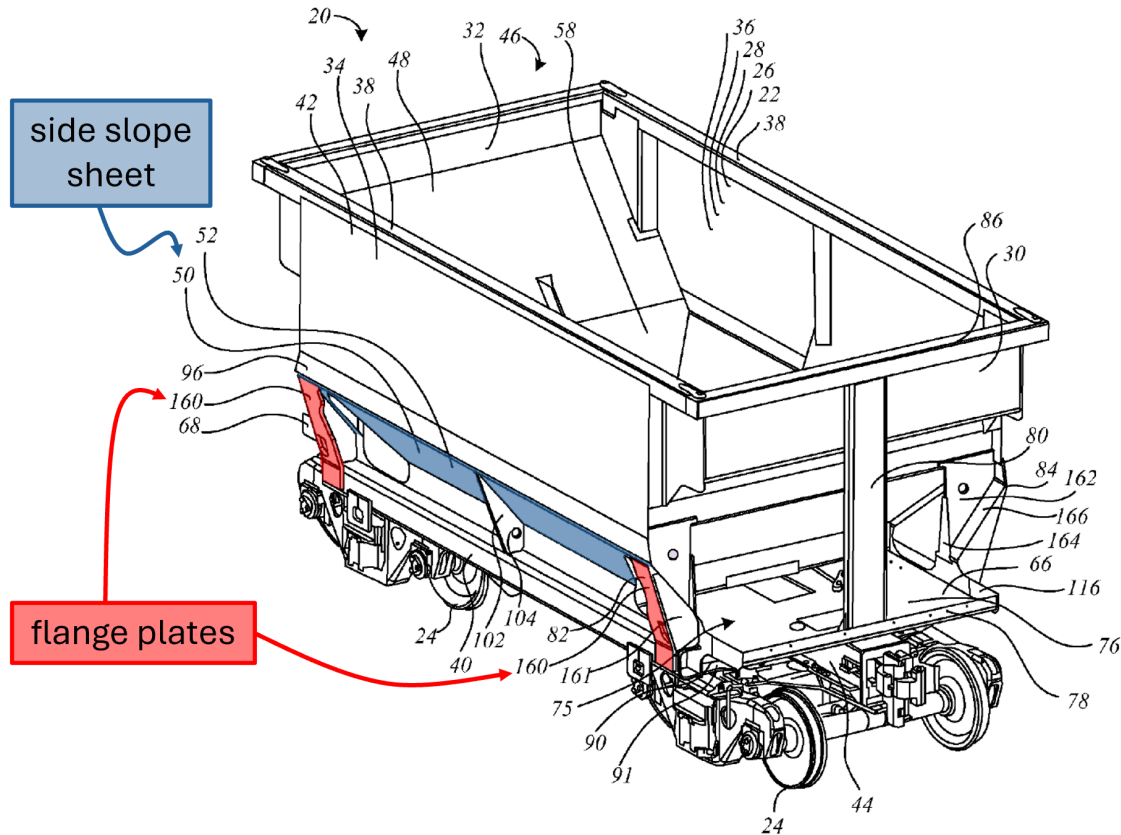


Figure 1

FreightCar America’s plain meaning construction of “sloped side sheet” is the only proposed construction that interprets the actual language of the asserted claims. Accordingly, the Court should construe “sloped side sheet” as the sloped portion of the side wall.

3. NSC’s Reply Position

a. FreightCar’s construction fails to consider the specification as a whole

FreightCar asserts that the item that the lead line for the reference numeral 50 is touching in Figure 1 (highlighted in orange) is a “sloped side sheet” as recited in claims 6 and 7 of the ’892 Patent and claim 43 of the ’515 Patent.

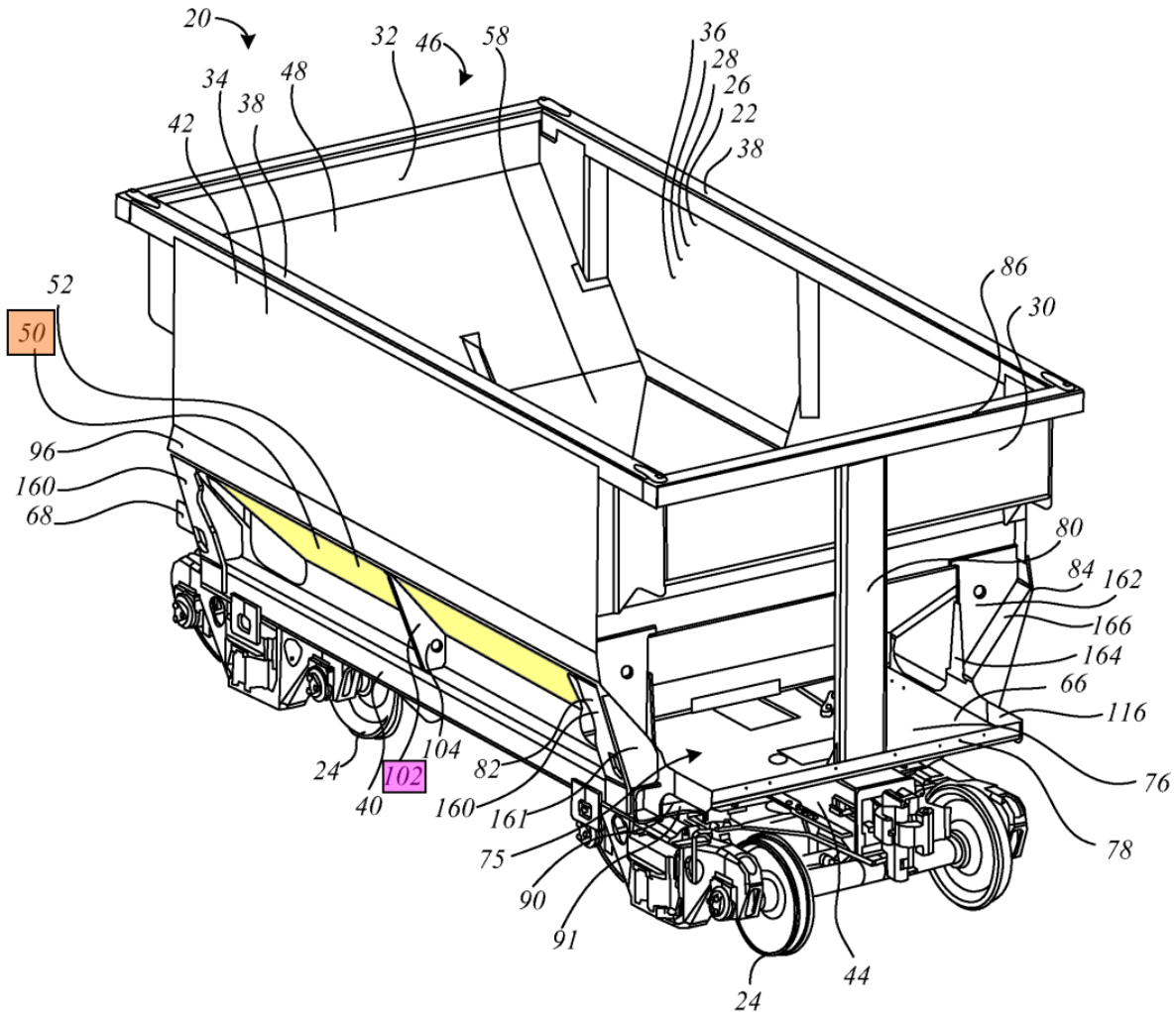


Figure 1

Although this feature might accurately be described as a side slope sheet, it cannot be the “sloped side sheet” used in the claims. The claims themselves specify that the claimed “sloped side sheet” “meets said first [sidewall/side wall] at said transition portion” and therefore cannot be the first [sidewall/side wall]. (See ’892 Patent, claims 6 and 7; ’515 Patent, claim 43.) As explicitly

recited in the claims, the side wall includes “a third region including a side sheet transition portion passing across the side wall stiffener from an inboard margin thereof to an outboard margin thereof.” *Id.* The sidewall stiffener is identified with reference numeral 102 (highlighted in pink) in the above copy of Figure 1 and the claimed side sheet transition portion of the third region of the first sidewall, which passes across the side wall stiffener from an inboard margin thereof to an outboard margin thereof, is highlighted in yellow.

The component highlighted in yellow in the above Figure 1 is identified with reference numeral 98 in Figures 2a, 2b and 2c and, consistent with the language of these claims, is described in the specification as the component to which the portion of the side slope sheet assembly of the hopper discharge section is welded. (’892 Patent at 15:46-50 (“*side slope sheet 50* of the hopper discharge section *is welded to the lower margin of the inclined or sloped portion (of the sidewall) 98*, such that the structure presents a continuous sloped surface for containing, and then slidingly discharging, particulate lading.”) (emphasis added).) This is also stated in the Abstract of the Asserted Patents. (*See id.* at Abstract (“The side slope sheet of the hopper meets the sidewall at the transition of the sidewall sheet from the inside-the-post to the outside-the-post condition.”).)

With respect to the specifications’ use of reference numeral 50, this reference numeral refers to several parts that comprise “side slope sheet *assemblies 50*”. In Figure 1, the lead line for reference numeral 50 touches a first component understood to be part of the side slope sheet assembly. That first component is the sloped portion 98 in Figures 2a, 2b, and 2c, which is in the claimed transition portion. In Figure 3(b) the lead line for reference numeral 50 touches a second component understood to be part of the side slope sheet assembly. That second component is in the hopper discharge section and is the “sloped side sheet” in claims 6 and 7 of the ’892 Patent and claim 43 of the ’515 Patent. (’892 Patent at Figure 3(b) and claims 6 and 7; ’515 Patent at claim

43.)

As detailed above, FreightCar’s proposed construction of “sloped side sheet” ignores the critical context provided by the claims in which that language appears and thus, violates the key patent law tenet that the claims themselves are the most important part of the intrinsic record used in construing claim language. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’”) (citing and quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004); see also *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) (“we look to the words of the claims themselves ... to define the scope of the patented invention”); *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 980 (Fed. Cir. 1995)) (“The written description part of the specification itself does not delimit the right to exclude. That is the function and purpose of claims.”).)

The language of the claims make eminently clear what component is being claimed. When the claim language is mapped to the preferred embodiment there is only one component that the “sloped side sheet” can be mapped to, and that is the component NSC has identified. Accordingly, NSC’s proposed construction should be adopted.

b. The claimed “sloped side sheet” and “sidewall” are two distinct claim features

FreightCar’s construction is also untenable because the claims of the Asserted Patents make clear that the “sloped side sheet” and the “sidewall” are two distinct features. Claim 6 of the ’892 Patent and claim 43 of the ’515 Patent both state “said first *sloped side sheet meets said first sidewall* at said transition portion.” Therefore, FreightCar’s construction that the “sloped side sheet” is the “sloped portion of the sidewall” cannot be correct.

As held by the Federal Circuit, “[w]here a claim lists elements separately, the clear

implication of the claim language is that those elements are distinct components of the patented invention.” *Becton, Dickinson & Co. v. Tyco Healthcare Gp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (internal quotations omitted) (holding the claimed “hinged arm” and “spring means” were necessarily separate structures because the claims recited the two structures were “connected to” one another.) FreightCar attempts to distinguish *Becton* by ignoring the plain language of the claims, which recite “said first sloped side sheet *meets* said first sidewall at said transition portion.” (emphasis added). Requiring the “sloped side sheet” to be part of the side wall as FreightCar proposes would “render the asserted claims nonsensical.” *Id.*

FreightCar argues that *Google LLC v. EcoFactor, Inc.*, 92 F.4th 1049, 1058 (Fed. Cir. 2024) supports its position that the “sloped side sheet” and “side wall” are not separate and distinct features. However, as acknowledged in *Google*, there is a “presumption that separately listed claim limitations may indicate separate and distinct physical structure.” *Google*, 92 F.4th at 1058. In *Google*, the term to be construed related to five computer inputs (including “said first internal temperature,” “said first external temperature,” and “the forecasted temperature”) that the Court found did not need to be separate because the claim language and specification allowed “any of the five claimed inputs to potentially be used to calculate another claimed input.” *Id.*

FreightCar cannot overcome the presumption that the “sloped side sheet” and the “first sidewall” are separate and distinct features. A physical object, like the claimed “sloped side sheet,” cannot “meet” itself, as required by the claims. If FreightCar’s construction were adopted, the claimed “meet[ing]” “at said transition portion” would be improperly devoid of all meaning. *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 810 (Fed. Cir. 2021) (“It is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous.”).

For at least this additional reason, NSC’s construction should be adopted.

4. FreightCar America's Sur-Reply Position

NSC does not dispute that “sloped side sheet” should be construed in accordance with its plain meaning. But under its plain meaning, “sloped side sheet” must refer to a side sheet or a portion thereof. NSC’s insistence that “sloped side sheet” refers to a slope sheet (a surface on which material slides to reach the bottom doors) rather a side sheet (part of the side wall) is an unabashed attempt to rewrite claim language that NSC drafted but now finds inconvenient.

NSC argues that the sloped portion of the side wall “cannot be the ‘sloped side sheet’ used in the claims” because the claims state that the first sloped side sheet “meets said first [sidewall/side wall] at said transition portion.” Reply at 19. However, it is reasonable to say that a part (the sloped side sheet) meets the whole (the side wall) at a particular point. For example, an arm meets the body at the shoulder.

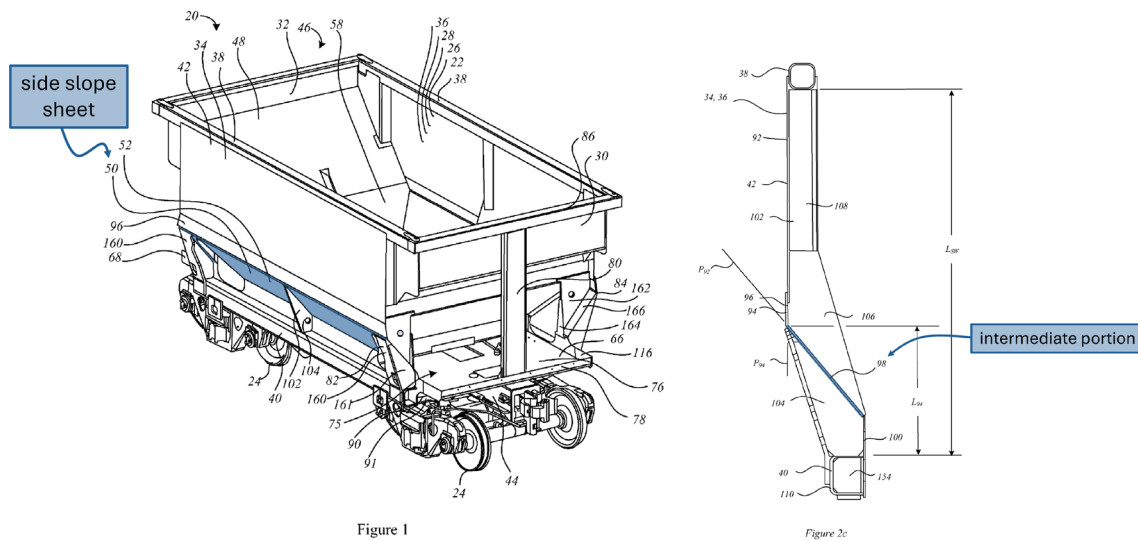
Even if NSC were correct that applying the plain meaning of “sloped side sheet” would make the claims nonsensical, this would not justify rewriting the claim language as NSC proposes; it would simply mean the claims are indefinite and invalid. *See Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1373–74 (Fed. Cir. 2004). Indeed, the Federal Circuit has:

repeatedly and consistently ... recognized that courts may not redraft claims, whether to make them operable or to sustain their validity. Even a nonsensical result does not require the court to redraft the claims of the [asserted] patent. Rather, where as here, claims are susceptible to only one reasonable interpretation and that interpretation results in a nonsensical construction of the claim as a whole, the claim must be invalidated.

Id. at 1374 (citations and punctuation omitted); *accord Horizon Pharma, Inc. v. Dr. Reddy's Lab'ys Inc.*, 839 F. App'x 500, 505 (Fed. Cir. 2021) (“That the proper construction of the claims is nonsensical does not warrant judicial redrafting of the claims.”); *In re Shafovaloff*, 2025 WL

1779173, at *1-2 (Fed. Cir. June 27, 2025) (nonprecedential) (“construing ‘bent’ as ‘bendable’ would rewrite the claim language to include what is foreclosed by the plain meaning”).

NSC next relies on column 15 of the ’892 patent, which states that the “upper margin of the side slope sheet 50 of the hopper discharge section is welded to the lower margin of the inclined or sloped portion 98” of the side wall. Reply at 20; ’892 patent at 15:46-50. This passage is irrelevant because it discusses the “side slope sheet 50,” not the claimed “sloped side sheet.” Moreover, the cited passage – which suggests that side slope sheet 50 and sloped portion 98 are distinct structures – is inconsistent with the specification’s figures. As discussed in FreightCar America’s answering position, the figures label *the very same sloped surface* with both numeral 50 and numeral 98.



’892 Patent, Figs. 1, 2c; *see supra*, FreightCar America’s Answering Position. This shows that the side slope sheet 50 and the transition portion 98 are one and the same structure, contrary to the specification passage on which NSC relies. A specification passage that is inconsistent with other portions of the specification, and which does not even mention the claim term “sloped side sheet,” does not support NSC’s attempt to rewrite that claim language.

In an attempt to reconcile the inconsistent portions of the specification, NSC argues that the numeral 50 actually refers to a side slope sheet *assembly*. Reply at 20. Under NSC’s theory, the lead line for numeral 50 does not point to the “side slope sheet 50,” but to “a first component understood to be part of the side slope sheet assembly.” *Id.* NSC cites nothing to support its strained theory. Moreover, NSC’s position is at odds with other portions of the specification that use different numerals to refer to an assembly and the individual components that comprise the assembly. *See, e.g.*, ’892 patent at 15:9-13; (“Side sheet assembly 42 may include an upper sheet portion or member 92 ... and a lower sheet portion or member 94.”). Further even if NSC were correct, it would only demonstrate that the ’892 patent is fatally unclear about whether the numeral 50 refers to the “side slope sheet” or a larger “side slope sheet assembly.” The specification’s ambiguous use of the numeral 50 cannot justify twisting the plain meaning of the term “sloped side sheet” so that it encompasses a structure that is not part of any side sheet.

NSC next asserts that, when “the claim language is mapped to the preferred embodiment there is only one component that the ‘sloped side sheet’ can be mapped to....” Reply at 21. FreightCar America agrees. The side sheets in the preferred embodiment’s side wall have a sloped portion 98. The claim language “sloped side sheet” is most naturally mapped to that feature.

NSC next argues that FreightCar America’s construction is incorrect because the “side wall” and the “sloped side sheet” are separately listed in the claims and therefore must be “distinct claim features.” Reply at 21-22. NSC again relies on Claim 6’s statement that the sloped side sheet “meets” the side wall. *Id.* NSC insists that FreightCar America’s construction would “render the asserted claims nonsensical.” *Id.* However, as discussed above, it is not nonsensical to say a part “meets” the whole, *e.g.*, to say an arm meets the body at the shoulder. Even if NSC were correct that the plain meaning of “sloped side sheet” renders the claim nonsensical, that would

only mean that Claims 6 and 7 are indefinite and invalid. It would not justify rewriting “sloped side sheet” to mean “side slope sheet.” *See Chef*, 358 F.3d at 1373–74; *Horizon*, 839 F. App’x at 505.

NSC’s cases do not support its position. In *Becton, Dickinson & Co. v. Tyco Healthcare Gp., LP*, 616 F.3d 1249 (Fed. Cir. 2010), the court considered whether two claim elements – a “hinged arm” and a “spring means” – could be the same structure, not whether one could be part of the other. *Id.* at 1255. Under Becton’s proposed construction, the hinged arm would have been “‘connected to’ itself,” a “nonsensical” result. *Id.* No such absurdity results from saying a part “meets” the whole. To continue the earlier example, an arm can be said to meet the body at the shoulder, even if cannot be said to “meet” itself.

Google LLC v. EcoFactor, Inc., 92 F.4th 1049 (Fed. Cir. 2024), is even less helpful to NSC. In *Google*, the Federal Circuit actually ***reversed*** a district court that ruled that separately listed claim elements must be distinct. *Id.*

And in *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801 (Fed. Cir. 2021), the Federal Circuit rejected a proposed construction that would have interpreted “hardware buffer” to mean “buffer implemented in hardware.” *Id.* at 809. Because every buffer is implemented in hardware, the construction would have rendered the word “hardware” superfluous and meaningless. Here, FreightCar America’s proposed construction would not render the language “meets said first sidewall at said transition portion” superfluous. That language specifies where the sloped side sheet meets the side wall, *i.e.*, the location of the sloped side sheet within the side wall.

None of NSC’s arguments justifies rewriting the claim term “sloped side sheet” as “side slope sheet.” The Court should reject NSC’s construction and adopt FreightCar America’s plain-meaning construction.

B. “shear plate extending [lengthwise/longitudinally] along said draft sill and cross-wise from side to side of said hopper car” (’515 Patent, claims 1, 7, 18, 20, 24, 32)⁵

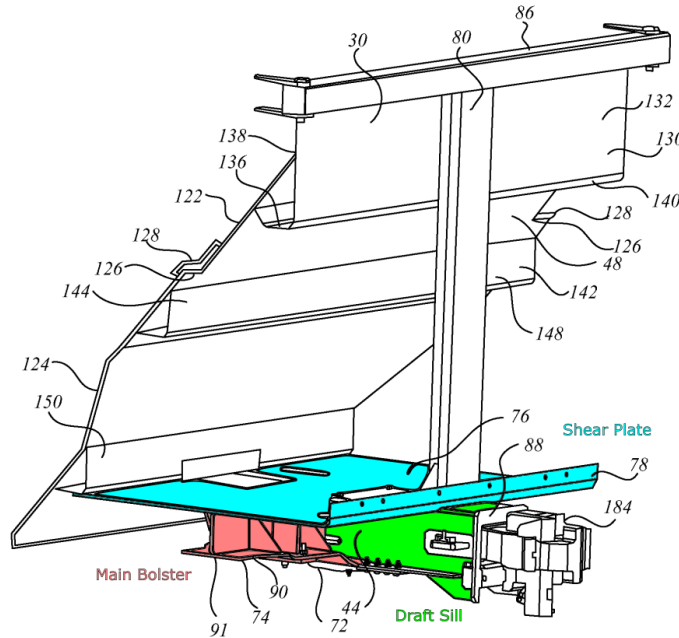
NSC’s Proposed Construction	FreightCar America’s Proposed Construction
Plain and ordinary meaning, i.e., shear plate having a length and width in a horizontal plane and extending both parallel and perpendicular to the longitudinal direction of the draft sill	shear plate extending [lengthwise along said draft sill / along said draft sill / longitudinally along said draft sill] and across the entire lateral width of said hopper car

1. NSC’s Opening Position

As an initial matter, the parties disagree about the claim term to be construed. NSC’s proposed claim term reflects that the shear plate extends both “along said draft sill” and “cross-wise from side to side of said hopper car.” FreightCar’s proposed claim term ignores the part of the claim term that discusses how the “shear plate extend[s] [lengthwise/longitudinally] along said draft sill.” This portion of the claim term is important to understand the “cross-wise from side to side of said hopper car” portion because it allows a POSITA to understand that the shear plate is extending in two dimensions and not just one. (Sellberg Decl. ¶ 27.)

The claim term should be given the plain and ordinary meaning of “shear plate having a length and width in a horizontal plane and extending both parallel and perpendicular to the longitudinal direction of the draft sill.” (Sellberg Decl. ¶ 28.) This construction is consistent with the specification, in which the shear plate is described as having both a length and a width that run parallel and perpendicular to a longitudinal direction of the draft sill.

⁵ For simplicity, FreightCar America adopts NSC’s identification of the term to be construed.

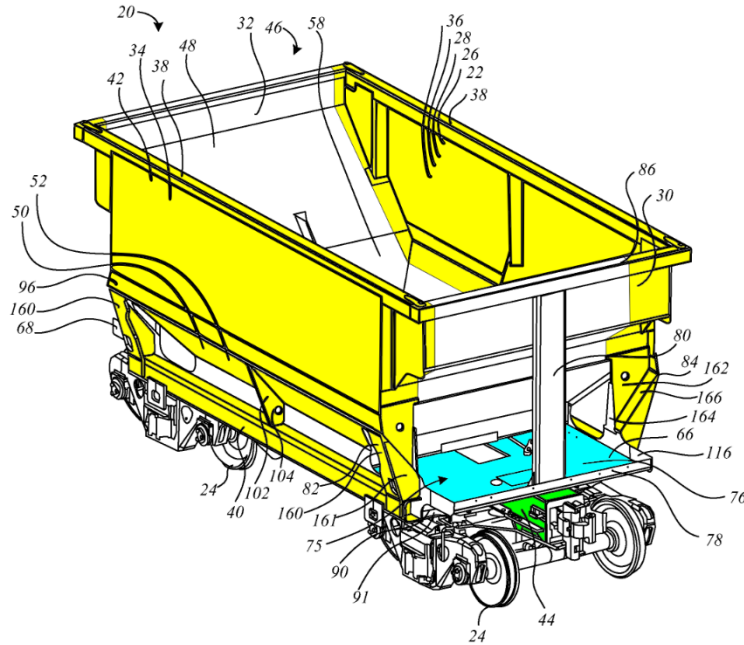


(*Id.*; '515 Patent Fig. 3a. (annotated); '515 Patent at 14:4-20 (“ . . . A shear plate 76 is mounted in an x-y horizontal plane defining the top cover plate of stub sill[/draft sill] 44. Shear plate 76 extends laterally from side sill to side sill, and longitudinally from the fore-and-aft end slope sheet 48 to the laterally extending end sill 78 of the car, which, in this instance may be an upturned flange formed on the longitudinally outboard margin of shear plate 76 . . . ”); *see also* 14:36-39 (“In the terminology of the industry, the portion of the center sill 44 (be it a stub center sill or a straight through center sill) that lies longitudinally outboard of the truck center CL-Truck may also be referred to as the draft sill.”))

Importantly, NSC’s construction captures the full scope of the phrase “crosswise from side to side of said hopper car,” which includes simply extending some distance on both sides of the midpoint of the hopper car. *See, e.g., side-to-side*, THEFREEDICTIONARY.COM, Ex. K (definition of “side-to-side” as “alternately left and right with respect to a central point”); *(from) side to side*, MERRIAM-WEBSTER.COM, Ex. L (definition of “(from) side to side” as “moving to the left and then to the right”). FreightCar’s proposed construction would seek to limit the ordinary meaning of this

phrase to require the distance be the entire lateral width of the hopper car. However, nowhere in the claims, specification, or prosecution history did NSC act as its own lexicographer or make any clear and unambiguous disclaimer of the full scope of this phrase. *Sisvel International S.A. v. Sierra Wireless, Inc.*, 81 F.4th 1231, 1236–37 (Fed. Cir. 2023) (affirming construction of “connection rejection message” as having its plain and ordinary meaning of “a message that rejects a connection” and rejecting proposed narrower construction because the “intrinsic evidence provides no persuasive basis to limit the claims to any particular cellular networks.”) With respect to FreightCar’s proposal, a construction of a patent claim in which the preferred and only embodiment of the invention is outside of the proposed construction “is rarely, if ever, correct and would require highly persuasive evidentiary support” to be sustained. *Vitronics Corp. v. Conceptiontronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (rejecting claim construction where “a preferred (and indeed only) embodiment in the specification would not fall within the scope of the patent claim.”) FreightCar’s proposed construction cannot be correct because requiring that the shear plate extend “across the entire lateral width of said hopper car” would result in claims that do not read on any embodiment disclosed in the specification.

As seen in Figure 1, there are elements laterally outboard of the shear plate, including the elements highlighted in yellow below:



(’515 Patent Fig. 1 (annotated to show shear plate in blue, draft sill in green, and some portions of the hopper car that are laterally outboard of the shear plate in yellow), 14:26-31 (“Corner posts 82 and 84 are rooted to, and stand upwardly from, *the junction of the laterally outboard ends of left and right hand main bolster and side sills 40.*”) (emphasis added).) Conversely, there are no embodiments disclosed in the specification in which the shear plate extends “across the entire lateral width of said hopper car.”

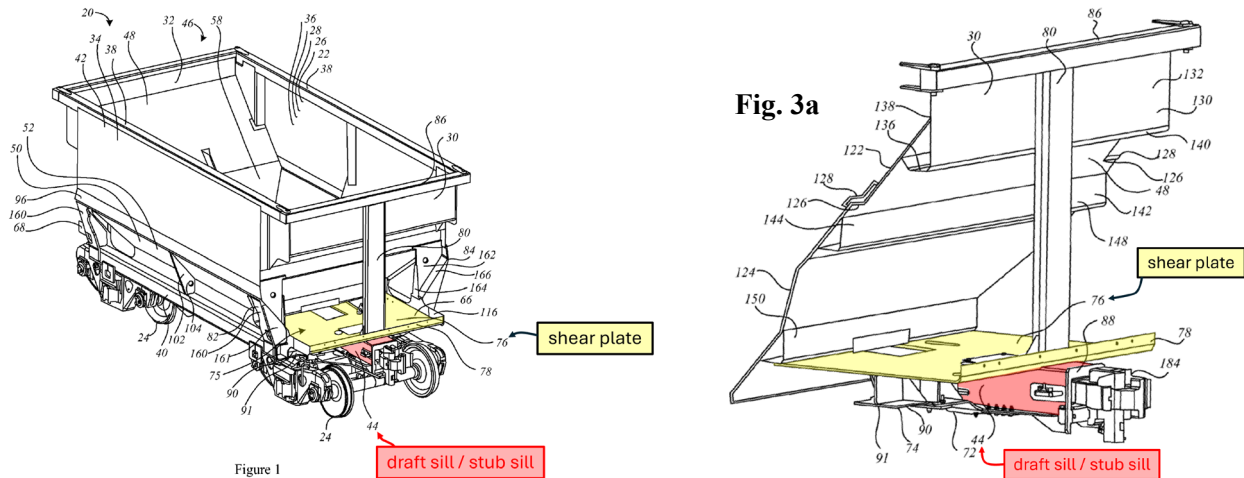
FreightCar cannot provide any justification for adopting a claim construction that would read out every embodiment disclosed in the specification. Accordingly, NSC’s proposed construction should be adopted.

2. FreightCar America’s Answering Position

The specification explains that each end of the hopper car “includes a draft sill and a substantially horizontal shear plate mounted over the draft sill.” ’515 Patent at 3:39-41. The

“shear plate 76 is mounted in an x-y horizontal plane defining the top cover plate of stub sill 44.”⁶

Id. at 14:12-13. These features are shown in Figures 1 and 3a below.



Each independent claim of the ’515 patent recites that the shear plate extends “cross-wise from side to side of the hopper car.” *Id.* at Claims 1, 7, 18, 20, 24, 32. As discussed below, the specification repeatedly and consistently uses “longitudinal” to refer to the direction in which the rail car moves along the tracks, and “cross-wise” to refer to the direction perpendicular to the longitudinal direction. The additional language “from side to side of said hopper car” specifies how far the shear plate must extend in the crosswise direction. NSC’s proposed construction should be rejected because it assigns no meaning to this language, rendering it superfluous.

a. The specification uses the term “crosswise” to refer to the direction perpendicular to the longitudinal direction.

The specification expressly defines “longitudinal” to refer to the direction of the railroad tracks on which the hopper car moves:

In terms of general orientation and directional nomenclature, for railroad cars described herein the longitudinal direction is defined as being coincident with the rolling direction of the rail road car, or rail road car unit, when located on tangent

⁶ The specification uses “draft sill” and “stub sill” interchangeably. *See, e.g.*, ’515 Patent at 17:31-33 (referring to “the draft sill (i.e., the stub sill)”).

(that is, straight) track. In the case of a railroad car having a center sill, be it a stub sill or a straight-through center sill, the longitudinal direction is parallel to the center sill, and parallel to the top chords.

Id. at 11:57-64; *see also id.* at 8:39-43 (referring to “rail road trucks for rolling motion along railroad tracks in a longitudinal direction”).

Although the specification does not formally define “cross-wise,” it consistently uses the term to refer to the transverse or sideways direction perpendicular to the longitudinal direction. For example, the specification states that the hopper car may have “a pair of opposed first and second end walls 30, 32, ***that extend cross-wise***, and a pair of first and second side walls 34, 36 that extend lengthwise....” *Id.* at 13:4-8 (emphasis added). Figure 1 shows that the cross-wise ends walls 30, 32 extend perpendicularly to the longitudinal axis of the hopper car, i.e., perpendicularly to the direction of the rail road tracks:

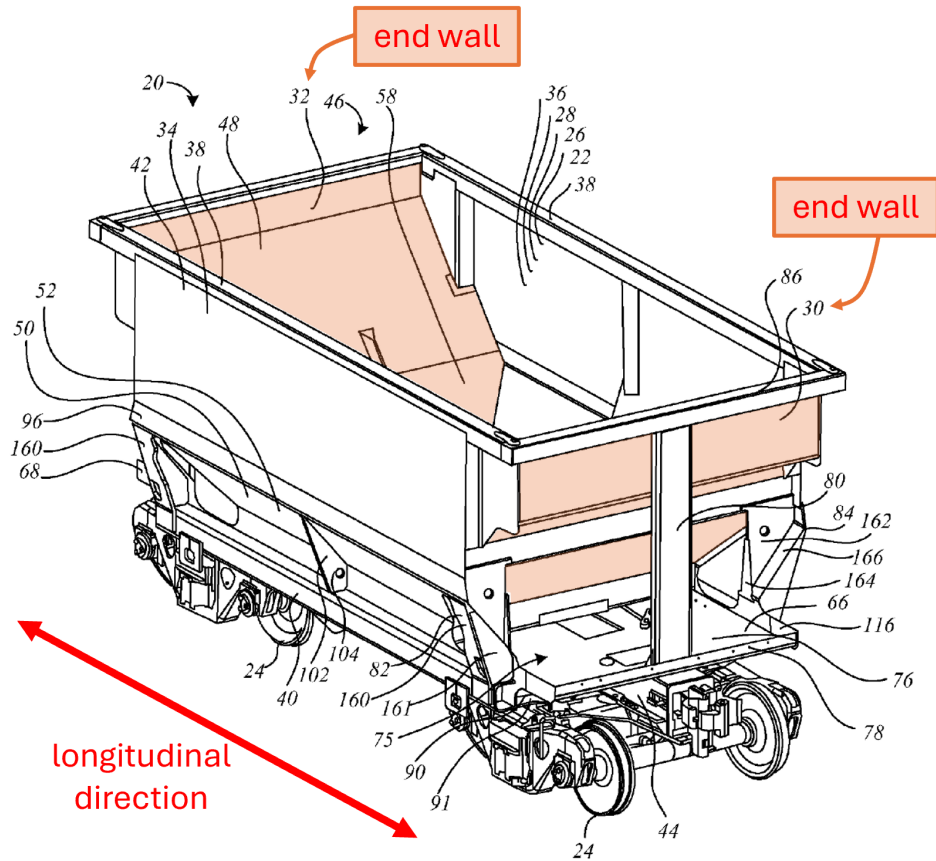


Figure 1

Likewise, the specification discloses “a draft sill extending in the longitudinal direction, [and] a main bolster extending cross-wise to either side of the draft sill....” *Id.* at 8:48-50. The specification later states that the bolsters “extend laterally.” *Id.* at 13:17-18; *see also id.* at 14:4-8. Taken together, these passages confirm that the “cross-wise” bolsters extend “laterally,” i.e., sideways or perpendicularly to the longitudinal axis of the hopper car. *See also id.* at Claim 1 (reciting “a main bolster extending cross-wise to said draft sill”).

To take another example, Claim 32 of the ’515 patent recites an “end slope sheet of said hopper extending cross-wise between said first and second side walls,” *id.* at 29:51-53, and “a cross-wise running top chord,” *id.* at 29:64-65. Figure 1 shows that these structures – end slope sheet 48 and top chord 86 – extend perpendicularly to the hopper car’s longitudinal axis:

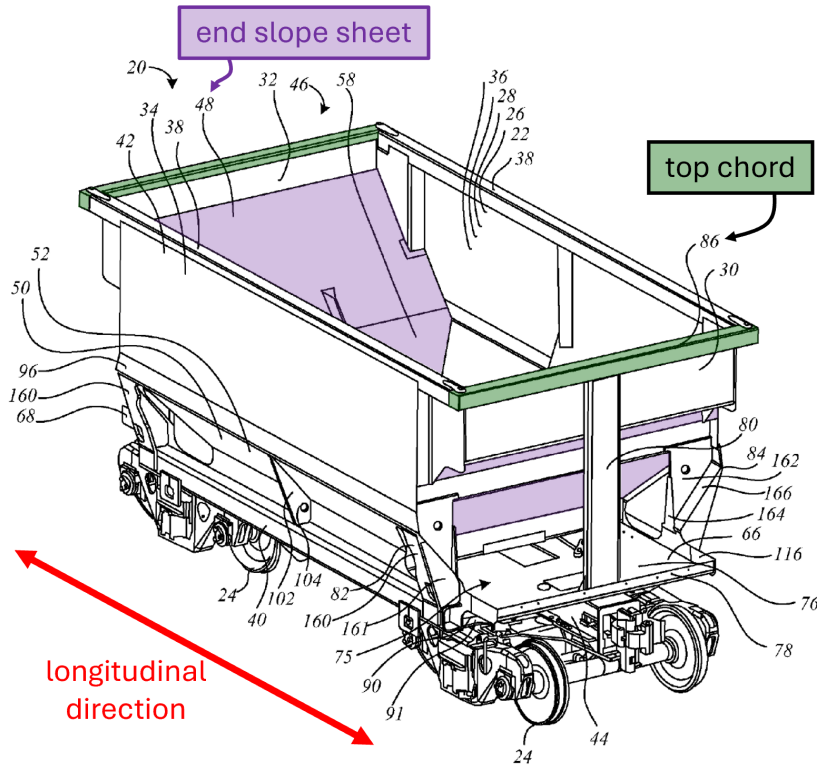


Figure 1

Thus, the specification uses “cross-wise” to refer to the direction perpendicular to the longitudinal direction.

- b. The additional claim language “from side to side of said hopper car” specifies how far the shear plate extends in the cross-wise direction.

The specification describes how far the shear plate extends in the longitudinal and cross-wise directions. One informative passage, quoted in NSC’s brief, states:

A shear plate 76 is mounted in an x-y horizontal plane defining the top cover plate of stub sill 44. Shear plate 76 extends laterally from side sill to side sill, and longitudinally from the fore-and-aft end slope sheet 48 to the laterally extending end sill 78 of the car, which, in this instance may be an upturned flange formed on the longitudinally outboard margin of shear plate 76.

Id. at 14:12-18 (emphasis added); *see also supra*, NSC’s Opening Position. The underlined words in this passage – “laterally” and “longitudinally” – specify the directions in which the shear plate

extends, while the italicized phrases specify how far in each direction it extends, using other structures as reference points. *Id.* Those reference-point structures are shown below in Figure 1:

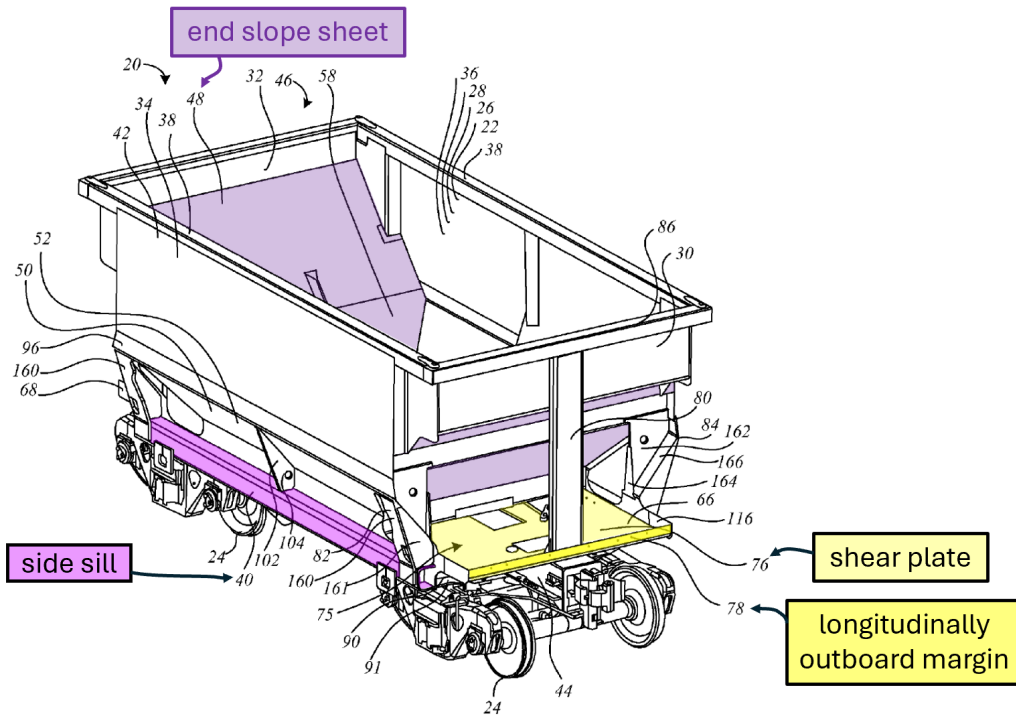


Figure 1

The claims of the '515 patent also specify the directions in which the shear plate extends. However, they use the terms “lengthwise” and “cross-wise” rather than “longitudinally” and “laterally”:

said shear plate extending **lengthwise** along said draft sill and **cross-wise from side to side of said hopper car**

Id. at Claims 1, 7, 18, 20 (emphasis added).⁷ Unlike the specification, the claims of the '515 patent do not specify how far the shear plate extends in the lengthwise or longitudinal direction. But they do specify how far the shear plate extends in the lateral or cross-wise direction: it extends “from side to side of said hopper car.” *Id.* Accordingly, “the shear plate extending ... cross-wise from

⁷ Claim 32 uses “longitudinally” rather than “lengthwise.” '515 Patent at 29:42.

side to side of said hopper car” should be construed to mean “the shear plate extends across the entire lateral width of the hopper car.”

c. NSC’s construction would render the claim language “from side to side of said hopper car” superfluous.

NSC’s construction assigns the phrase “from side to side of said hopper car” no meaning. NSC’s construction specifies that the shear plate extends in the crosswise direction, by stating that the shear plate extends “perpendicular to the direction of the draft sill.” But the construction never specifies that the shear plate extends “from side to side of the hopper car.” NSC’s construction makes this claim language superfluous and should be rejected. *See Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950–51 (Fed. Cir. 2006).

NSC’s construction is flawed in other respects. For example, it states that the shear plate has “a length and a width in a horizontal plane, extending both parallel and perpendicular to the direction of the draft sill.” *Supra*, NSC’s Opening Position. However, every plate has a length and a width and extends in two directions. NSC’s construction adds nothing to the word “plate” other than specifying that it is horizontal.

NSC attempts to support its construction with dictionary definitions of “side to side,” such as Merriam-Webster’s definition: “moving to the left and then to the right.” *Id.* But these are definitions of side-to-side **movement** – they are irrelevant to fixed structures such as the claimed shear plate. Ex. L (providing the example “waving the flags from side to side”); Ex. K (providing the example “side-to-side motion of a boat”). NSC cites no definition explaining what it means, in the context of a mechanical device, for a component of the device to “extend from side to side of the device.”

NSC also relies on the assertion by its expert, Mr. Sellberg, that NSC’s construction is the plain and ordinary meaning of the disputed term. Sellberg Decl. ¶ 28. Mr. Sellberg’s declaration

simply restates the arguments of NSC's attorneys and then makes the conclusory assertion that NSC's construction is the ordinary meaning of the claim language. *Id.* ¶¶ 27-29. "[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005).⁸

Finally, NSC argues that FCA's proposed construction would "not read on any embodiment disclosed in the specification." *Supra*, NSC's Opening Position. According to NSC, the only embodiment of the shear plate disclosed in the specification does not extend the entire lateral width of the hopper car. *Id.*

NSC is incorrect. The specification expressly discloses an embodiment of the shear plate that extends from one side of the hopper car to the other side. Specifically, the written description states that "shear plate 76 extends laterally *from side sill to side sill*...." '515 Patent at 14:13-14 (emphasis added). Structures that extend laterally from side sill to side sill extend fully across the hopper car, as the specification elsewhere explains:

In a multiple hopper car, the car may have extending members or reinforcements, which may be cross-bearers, or cross-bearers with shrouds, or merely shrouds, particularly where the car is a multiple hopper car. ***These cross-members may run fully across the car from side sill to side sill***, and may intersect the center sill, or the center sill shroud as may be.

Id. at 13:30-36 (emphasis added). Thus, even if some embodiments of shear plate 76 do not extend across the entire lateral width of the hopper car, other embodiments of the shear plate do extend "fully across the car" and would be encompassed by FreightCar America's proposed construction.

⁸ Expert testimony is of little importance here because the technology is simple and because the phrase "shear plate extending [lengthwise/longitudinally] along said draft sill and cross-wise from side to side of said hopper car" has no special meaning in the rail-car field. Ahmadian Decl. ¶ 19.

None of NSC’s arguments justifies entirely eliminating the phrase “from side to side of said hopper car” from the asserted claims. That phrase should be given effect. *Bicon*, 441 F.3d at 950–51. Accordingly, the claim language “shear plate extending [lengthwise/longitudinally] along said draft sill and cross-wise from side to side of said hopper car” should be construed to mean “shear plate extending [lengthwise/longitudinally] along said draft sill and across the entire lateral width of said hopper car.”

3. NSC’s Reply Position

NSC’s Amended Construction	FreightCar America’s Proposed Construction
Plain and ordinary meaning, i.e., shear plate extending [lengthwise along said draft sill / along said draft sill / longitudinally along said draft sill] and laterally from side sill to side sill	shear plate extending [lengthwise along said draft sill / along said draft sill / longitudinally along said draft sill] and across the entire lateral width of said hopper car

a. NSC’s amended construction obviates any rational dispute

FreightCar complains in its answering brief that NSC’s original construction assigns no meaning to the claim language “from side to side of said hopper car.” In an attempt to narrow the dispute between the parties on this point, and to reduce the issues before the Court, NSC has amended its construction to state that the shear plate extends “laterally from side sill to side sill” and proposed this as a compromise to FreightCar. FreightCar rejected that proposal.

NSC was startled by FreightCar’s rejection of this amended construction. The amended construction finds support directly in the arguments and support presented by FreightCar. Specifically, FreightCar emphasizes that:

The specification expressly discloses an embodiment of the shear plate that extends from one side of the hopper car to the other side. Specifically, the written description states that ‘*shear plate 76 extends laterally from side sill to side sill...*’

(*Supra*, FreightCar’s Answering Brief (emphasis added) (quoting ’515 Patent at 14:13-14).)

The embodiment cited by FreightCar is shown in Figure 1 of the ’515 Patent:

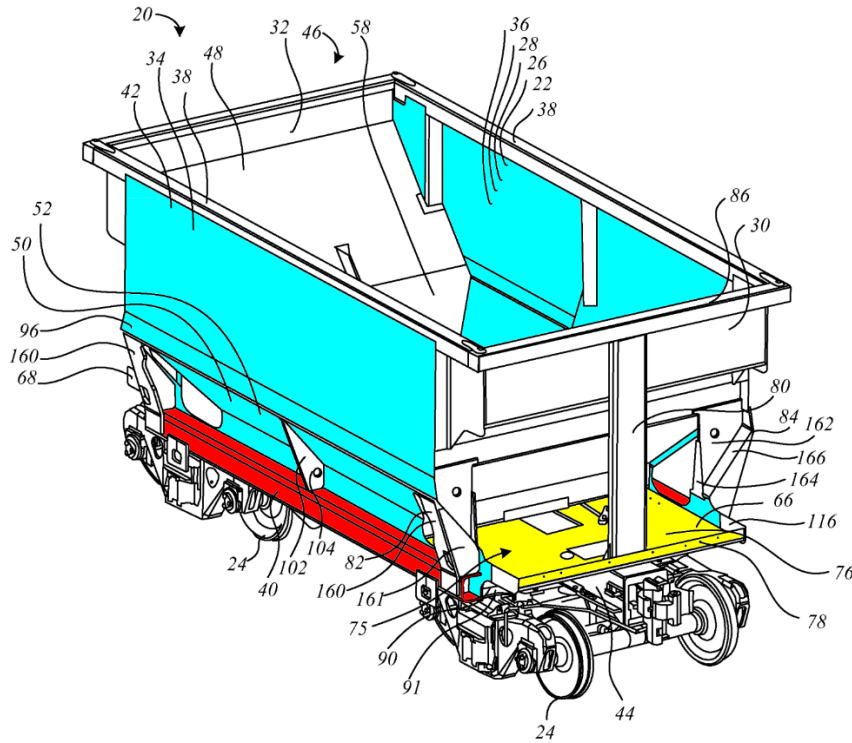
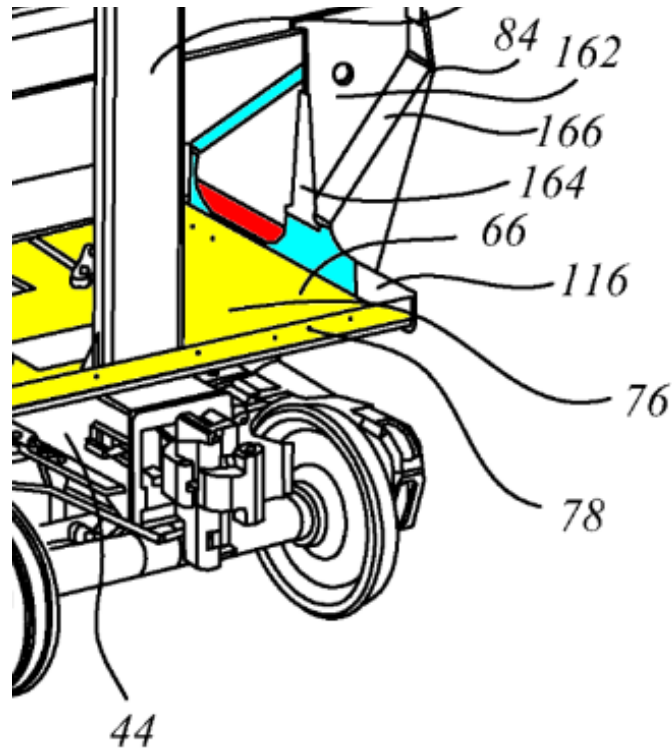


Figure 1

Figure 1 depicts the shear plate (76) (highlighted in yellow) extending laterally from side sill to side sill (40) (highlighted in red). Thus, NSC’s amended compromise construction incorporates, and is supported by, the portion of the specification cited by FreightCar in construing these claim terms.

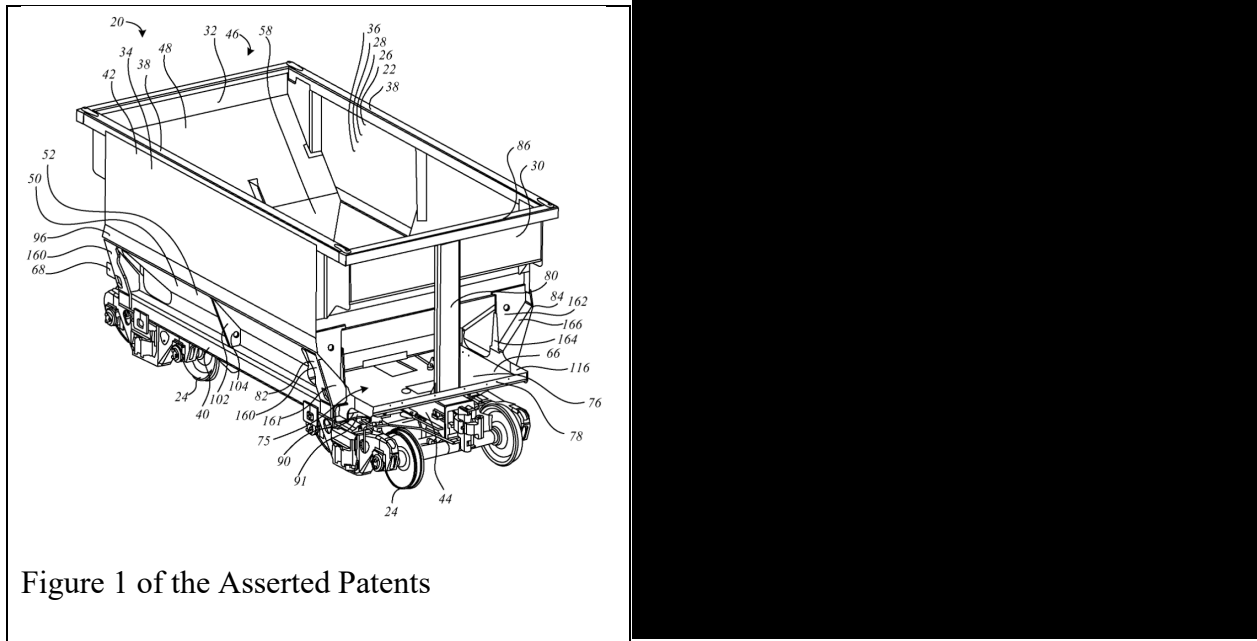
FreightCar asserted that it could not accept NSC’s amended compromise construction because it contemplates a scenario “in which an intermediate piece is situated between the shear plate and the side sill.” Notably, as shown in the enlarged portion of Figure 1 below, there is a portion of the sidewall (highlighted in blue) between the side sills (highlighted in red) and the shear plate (highlighted in yellow), and this is the only embodiment of a “shear plate extending... cross-wise from side to side of said hopper car.” (’515 Patent claims 1, 7, 18, 20, 24 and 32.)



Therefore, there is no rational dispute between the parties regarding this construction, and NSC's amended construction should be adopted by the Court.

b. FreightCar's construction would not read on the only embodiment of this feature in the specification

The only embodiment containing this feature in the specification is identical to the Accused Products offered for sale, sold, made, used, and imported by FreightCar, as shown below:



FreightCar’s construction is an attempt to avoid infringement by improperly reading limitations into the claims that find no support in the specification. The preferred and only embodiment of this claimed feature in the specification, as seen in Figure 1, shows the shear plate (76) extending laterally from side sill to side sill (40) with a portion of the sidewall therebetween.

As explained in NSC’s opening brief, FreightCar’s construction would not read on this preferred (and indeed only) embodiment in the specification of this claimed feature and therefore is presumptively wrong. *Vitronics*, 90 F.3d at 1583 (rejecting claim construction where “a preferred (and indeed only) embodiment in the specification would not fall within the scope of the patent claim.”).

Moreover, FreightCar’s construction requires the shear plate to extend “across the entire lateral width of the hopper car.” As shown in Figure 1 and in NSC’s opening brief, *supra*, however, portions of the hopper car are clearly outside of the lateral width of the shear plate, including the portion of the sidewall set between the shear plate and side sills.

Finally, FreightCar claims there are other embodiments where the shear plate does extend

fully across the hopper car, *i.e.*, where there is no sheet between the shear plate and the side sill. However, FreightCar fails to identify any such embodiment – indeed they cannot because none exists. Instead, FreightCar relies on an embodiment in the specification that is not depicted in the figures and, instead, refers to a multiple hopper car that includes a cross-member. ('515 Patent at 13:34-36.) But that embodiment nowhere says that there would be no intermediate plate between the cross member and side sills. The only embodiment depicted in the figures is explicitly for a “single hopper car” that always has an intermediate portion of the sidewall (highlighted in blue) sandwiched between the side sill (highlighted in red) and any interior component that extends from “side to side of said hopper car.” ('515 Patent at 13:25-27; Figure 2c (cropped and annotated); claims 1, 7, 18, 20, 24 and 32.)

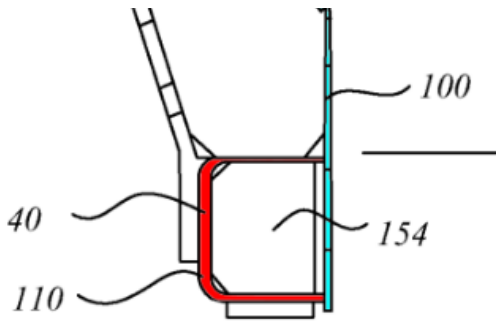


Figure 2c

Accordingly, NSC's construction should be adopted by the Court.

4. FreightCar America's Sur-Reply Position

FreightCar America explained in its answering position that NSC's construction of this term should be rejected because it assigns no meaning to the language “from side to side of said hopper car.” Answering Position at 36-38. After FreightCar America served that brief on NSC, NSC abandoned its flawed construction and adopted a new one. Ex. O.

In its reply, NSC reports that it proposed a new construction that would require the shear plate to extend “laterally from side sill to side sill.” Reply at 38. NSC claims to have been “startled” when FreightCar America declined to accept NSC’s new construction. *Id.* In fact, NSC did **not** propose a construction that required the shear plate to extend from side sill to side sill. NSC explained that, under its view of the proposed construction, the construction would encompass shear plates that did **not** extend all the way to the side sill:

Thus, we propose the following compromise construction: “shear plate extending [lengthwise/longitudinally] along said draft sill and cross-wise from side to side of said hopper car” means “shear plate extending [lengthwise along said draft sill / along said draft sill / longitudinally along said draft sill] and laterally from side sill to side sill.” ***We would expect such a construction to include a situation where there is an intermediate piece between the shear plate and the side sill.***

Ex. O (emphasis added). FreightCar America would have accepted a construction in which the words “extending ... laterally from side sill to side sill” were given their plain and ordinary meaning. But as the italicized text indicates, NSC proposed both a new construction **and** an unreasonable interpretation of that construction. FreightCar America could not agree that a shear plate extends “from side sill to side sill” even if it never reaches either side sill, because other structures are interposed between the shear plate and the side sills.

NSC argues that FreightCar America’s construction would exclude the embodiment in Figure 1, which NSC characterizes as the “only embodiment” in the specification. Reply at 40-42. NSC is incorrect. The specification of the asserted patents discloses at least two embodiments of shear plate 76. The first version of the shear plate, shown in Figure 1, does not extend from side sill to side sill because, as NSC points out, the side wall is interposed between the shear plate and the side sill. *Id.* at 39 (“there is a portion of the sidewall (highlighted in blue) between the side sills (highlighted in red) and the shear plate (highlighted in yellow)”). But the specification also

discloses another embodiment in which the shear plate *does* extend from side sill to side sill. ’515 patent at 14:13-14 (“Shear plate 76 extends laterally from side sill to side sill.”). This embodiment extends fully across the hopper car and would be encompassed by FreightCar America’s construction of “from side to side of said hopper car.”

NSC incorrectly asserts that FreightCar America relies on column 13 of the ’515 patent to show that the patent discloses a second embodiment of the shear plate. Reply at 42. In fact, FreightCar America pointed to the passage in column 14 (quoted in the preceding paragraph) to show that the patent discloses a second embodiment of shear plate 76. Answering Position at 37 (citing column 14, lines 13-14). FreightCar America quoted a passage from column 13 only to show the specification treats structures extending “from side sill to side sill” as extending “fully across the car.” *Id.* (quoting column 13’s discussion of cross-members).

NSC’s interpretation of its new construction twists the plain meaning of “extending ... from side sill to side sill” to cover shear plates that do *not* extend from side sill to side sill. Because NSC’s Orwellian interpretation of its new construction renders the construction unreasonable, the Court should reject NSC’s new claim construction and adopt FreightCar America’s plain-meaning construction: “shear plate extending [lengthwise/longitudinally] along said draft sill and across the entire lateral width of said hopper car.”

C. “flat bar” or “made of flat bar” (’892 Patent, claim 15)

Proposed Claim Term	NSC’s Proposed Construction	FreightCar America’s Proposed Construction
flat bar (proposed by NSC)	Plain and ordinary meaning, i.e., a flat piece of steel with a largely rectangular cross section	[made of] a flat piece of steel with a largely rectangular cross section, whether or not bent
made of flat bar (proposed by FreightCar America)	NSC disagrees that “made of” requires construction	made of a flat piece of steel with a largely rectangular cross section, whether or not bent

1. NSC's Opening Position

As an initial matter, the parties disagree regarding the term to be construed. NSC proposes the term “flat bar” be construed and FreightCar proposes the term to be construed should be “made of flat bar.” Notably, however, in FreightCar’s proposed constructions, the terms “made of” are not construed and, instead, are simply repeated verbatim. Courts need not construe terms that are not in dispute. *Vivid Technologies, Inc. v. Am. Science & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“... only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”). Accordingly, “flat bar,” as proposed by NSC, should be construed.

NSC contends that the term should be given its plain and ordinary meaning, i.e., “a flat piece of steel with a largely rectangular cross section.” “Flat bar” has been known and used in the railroad industry from its early days in the 1800’s. (Sellberg Decl. ¶ 33.) It refers to flat pieces of steel with largely rectangular cross sections. (Sellberg Decl. ¶ 35.)

Flat bar is referred to by name twice in the ’892 Patent. First, “flat bar” is referred to in claim 15 of the ’892 Patent in connection with the “first and second portions of said sidewall stiffener.” As used in claim 15, the first and second portions of the sidewall stiffener can refer to

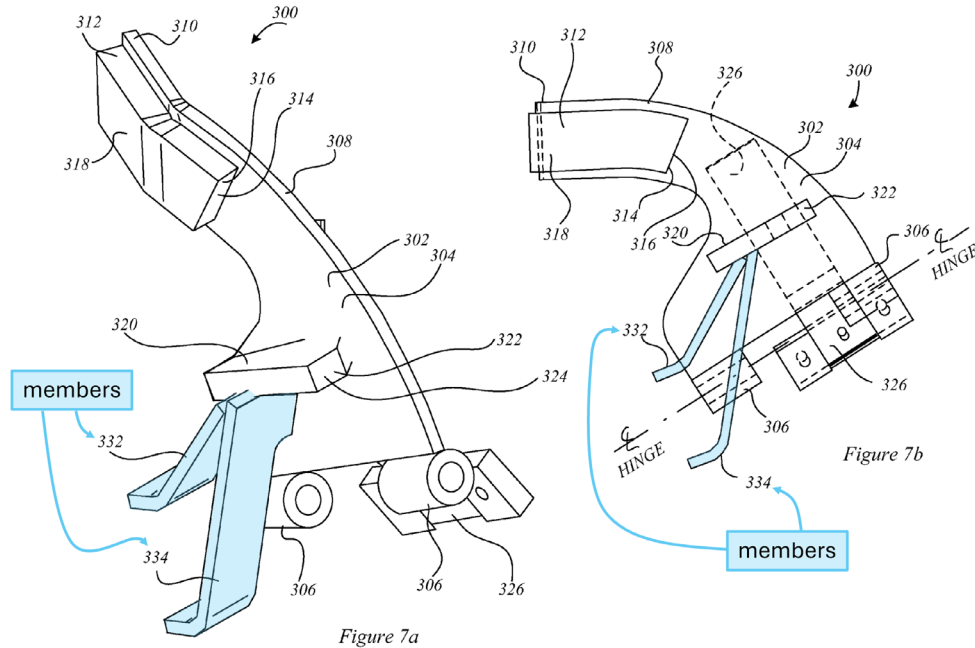
In neither case is “flat bar” used in a way that contradicts its plain and ordinary meaning. Accordingly, “flat bar” should be given its plain and ordinary meaning, namely, “a flat piece of steel with a largely rectangular cross section.” (Sellberg Decl. ¶ 35.)

FreightCar seeks to add the phrase “whether or not bent” to flat bar’s otherwise plain and ordinary meaning. “Whether or not bent” is meaningless and confusing; it encompasses both bent and unbent flat bar. “It is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous.” *Intel Corp. v. Qualcomm Inc.*, 21 F.4th 801, 810 (Fed. Cir. 2021). Accordingly, the Court should adopt NSC’s proposed construction and reject the addition of “whether or not bent” as proposed by FreightCar.

2. FreightCar America’s Answering Position

The parties’ disagreement concerning “made of flat bar” is very narrow. NSC argues that “flat bar” is “a flat piece of steel with a largely rectangular cross section.” *Supra*, NSC’s Opening Position. FreightCar America does not disagree. But the claim language is “made of flat bar,” not merely “flat bar.” ’892 Patent, Claim 15. While flat bar starts as a flat piece of steel, it can be bent during the manufacturing process. Ahmadian Decl. ¶¶ 22-23. The resulting product is “made of flat bar” even though the bar is no longer flat. *Id.*

The intrinsic evidence makes clear that the term “flat bar” applies to flat bars that have been bent during manufacturing. The specification describes “reaction force transmission members 332, 334 in the form of welded *flat bars*” ’892 Patent at 21:30-33 (emphasis added). These members 332, 334 are bent, as shown below in Figures 7a and 7b.



'892 Patent, Figs. 7a, 7b. NSC points to nothing in the specification or file history suggesting that “flat bars” cannot have bends.

NSC’s construction risks confusing the jury into believing that a structure with a bend cannot be made of flat bar, because it is not flat. FreightCar America’s construction eliminates the risk of jury confusion by adding the short phrase “whether or not bent” to the end of the construction. FreightCar America respectfully requests that the Court adopt this common-sense construction of “made of flat bar.”

3. NSC’s Reply Position

a. FreightCar seeks to inject a superfluous limitation

As stated in NSC’s opening brief, in FreightCar’s proposed constructions, the terms “made of” are not construed and, instead, are simply repeated verbatim. Courts need not construe terms that are not in dispute. *Vivid Technologies, Inc. v. Am. Science & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“... only those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy”). Accordingly, only the terms “flat bar,” as proposed

by NSC, should be construed.

NSC contends that the term should be given its plain and ordinary meaning, *i.e.*, “a flat piece of steel with a largely rectangular cross section.” “Flat bar” has been known and used in the railroad industry from its early days in the 1800’s. (Sellberg Decl. ¶ 33.) It refers to flat pieces of steel with largely rectangular cross sections. (Sellberg Decl. ¶ 35.)

There is nothing in the intrinsic record that would support adding a limitation relating to the bending of flat bars. The only appearance of the phrase “flat bar” in the intrinsic record is in claim 15 of the ’892 Patent and in the specification description of “force transmission members 332, 334 in the form of *welded* flat bars.” (’892 Patent 21:30-33 (emphasis added).) FreightCar seeks to conjure this limitation entirely from whole cloth.

Moreover, “whether or not bent” encompasses both alternatives of the dichotomy of bent and unbent flat bar and is thus superfluous. “It is highly disfavored to construe terms in a way that renders them void, meaningless, or superfluous.” *Intel*, 21 F.4th at 810. Accordingly, the Court should adopt NSC’s proposed construction and reject the addition of “whether or not bent” as proposed by FreightCar.

4. FreightCar America’s Sur-Reply Position

FreightCar America explained in its answering position that its construction was necessary to eliminate the risk the jury will mistakenly believe that a bent structure cannot not be “made of flat bar” because the structure is not flat. Answering Position at 48. In its reply, NSC did not dispute that the risk of jury confusion is real. Significantly, NSC never said it would refrain from expressly arguing to the jury that a structure is not made of flat bar because it is bent. NSC’s apparent desire to make such an argument is another reason that FreightCar America’s construction

is necessary. Accordingly, the Court should construe “made of flat bar” to mean “made of a flat piece of steel with a largely rectangular cross section, whether or not bent.”

V. CONCLUSION

1. NSC’s Conclusion

For the foregoing reasons, it is respectfully requested that the Court adopt NSC’s proposed claim constructions.

2. FreightCar America’s Conclusion

FreightCar America respectfully requests that the Court adopt its claim constructions for the three disputed claim terms.

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CERTIFICATE OF SERVICE

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